

Appln No. 10/045,194

Amdt date September 8, 2004

Reply to Office action of June 25, 2004

REMARKS/ARGUMENTS

Claims 1-54 are now in the application. Claims 1-7, 10, 19, 21-27, 30, 39, 41-42, 44, 46-47, and 49 have been amended. Claims 52-54 have been added. Applicants respectfully request reconsideration and allowance of the application in view of the amendment and the following remarks.

The Applicants acknowledge with appreciation the indication of allowable subject matter in Claims 19-20, 39-40, 44-45, and 49-50. See paragraph 3 of the Office Action and the Office Action Summary. Claims 19, 39, 44, and 49 have been amended to incorporate all the recitals of their respective base claims, and the remaining dependent claims 20, 40, 45, and 50 all depend from a claim that has been indicated as being allowable. Accordingly, Claims 19-20, 39-40, 44-45, and 49-50 should now be allowed.

The Examiner has rejected Claims 1-18, 21-38, 41-43, 46-48, and 51 under 35 U.S.C. §103 as being unpatentable over Kim (US 6,618,443) in view of Takahashi (US 6,393,152). The Applicants respectfully traverse these rejections. Further, the Applicants have amended Claims 1-7, 10, 21-27, 30, 41-42, and 46-47 to clarify certain features of the subject matter being claimed.

Kim discloses a down sampling processor that "does not reduce the resolution of the image but simply removes redundant pixels from the low resolution filtered image." See col. 6, lines 47-49. Kim, while providing for the storage the spatial pixel values corresponding to the down-sampled image, does not provide for the storage of pixel values corresponding to images that has not been or should not be down-sampled. By contrast, Claim 1 recites " ... memory comprising a plurality of buffers ... the picture being stored in two or more buffers without size reduction when the

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indication of the associated flag is indicating unarmed
...(emphasis in underline added)."

Moreover, the Examiner correctly acknowledges in the Office Action that Kim is also deficient by the fact that it does not provide for an "identification flag." See paragraph 2 of the Office Action.

To make up for this additional deficiency in Kim, the Examiner cited Takahashi for its disclosure of a flag that had been added to a data packet. The problem with citing Takahashi as a reference is that the flag in Takahashi is only pre-added to the data packet (i.e., not adaptively or on the fly) so that "the process of identifying the packet corresponding to the I frame is omitted in the variable-length decoding circuit 63a, resulting in a reduction of the amount of operation." See col. 32, lines 23-27. Thus, the reason for using the identification flag in Takahashi is to omit the mechanism "for identifying the packet corresponding to the I frame" and to simplify the decoding circuit 63a. By contrast, Claim 1 recites:

a counter for counting a particular picture
type of a plurality of pictures;

a video decoder for decoding the digital
bitstream to generate the plurality of pictures, each
picture being associated with a flag for providing an
indication on whether or not the picture is to be reduced
in size to picture data prior to being stored, the
indication of the flag being adaptively determined by the
counter and after a picture type of the associated
picture has been first determined by the
decoder...(emphasis in underline added).

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Accordingly, because Takahashi address a completely different problem of providing a pre-added data packet flag for identifying that a data packet is an I frame to reduce the amount of operation on a decoding circuit, there is no motivation to combine Takahashi with Kim to teach the above recited adaptive features in which a flag is "being adaptively determined by the counter and after a picture type of the associated picture has been first determined by the decoder (emphasis in bold added)."

In fact, by its teaching on the advantages of using a flag to reduce the amount of operation on the decoding circuit, Takahashi actually teaches away from the present claim recitation of "the indication of the flag being adaptively determined ... after a picture type of the associated picture has been first determined by the decoder (emphasis in bold added)" as recited in Claim 1.

Similarly, amended independent Claim 21 should be patentable over Kim and/or Takahashi for its recitations of a method of decoding a digital bitstream, the method comprising:

decoding the digital bitstream to generate a plurality of pictures, each picture being associated with a first flag, a second flag, and a counter for indicating whether or not the picture is to be reduced in size to picture data prior to being stored in memory, the memory comprising a plurality of buffers;

determining a picture type of the picture;
counting a particular picture type of the plurality of pictures generated using the counter;

* * *

storing the picture in a buffer as the picture data when the associated second flag is armed adaptively

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based on the associated counter and when the first flag is enabled;

storing the picture in two or more buffers without size reduction when the associated second flag is unarmed adaptively based on the associated counter or when the associated first flag is not enabled ...

(emphasis in underline added).

Accordingly, the Applicants respectfully submit that Claims 1 and 21 are each independently patentable over Kim (US 6,618,443) in view of Takahashi under 35 U.S.C. §103.

With respect to amended independent Claim 41, the Applicants would respectfully like to note that neither Kim nor Takahashi (whether alone and/or in combination) discloses or suggests the limitations of "a ... quantization differential compression algorithm" and not just quantizing the actual pixel values or just differencing the values between two pixels. Thus, since none of the cited references disclose or suggest the above recited limitation of Claim 41, they certainly cannot disclose the further limitations in Claim 41 of "a block-based image compressor to compress the anchor pictures in spatial domain using a gain adaptive quantization differential compression algorithm to generate compressed bits that have been both differenced and quantized" and "a block-based image decompressor to decompress the compressed bits using a gain adaptive quantization differential decompression algorithm to generate the anchor pictures."

(Emphasis in underline added.)

Similarly, amended independent Claim 46 should be patentable over Kim and/or Takahashi for its recitations of a method of generating a display video stream using a digital bitstream, the method comprising:

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* * *

b) compressing the anchor pictures in spatial domain using a gain adaptive quantization differential compression algorithm to generate compressed bits that have been both differenced and quantized;

* * *

d) decompressing the compressed bits using a gain adaptive quantization differential decompression algorithm to generate the anchor pictures; and

e) repeating steps a)-d) using the decompressed anchor pictures during the decoding of the digital bitstream. (Emphasis in underline added.)

Accordingly, the Applicants respectfully submit that Claims 41 and 46 are also each independently patentable over Kim (US 6,618,443) in view of Takahashi under 35 U.S.C. §103. See M.P.E.P. 2143.03 ("To establish *prima facie* claimed invention, all the claim limitations must be taught or suggested by the prior art.")

Dependent Claims 2-18 (in which dependent Claims 2-7 and 10 have been further amended) depend (directly or indirectly) from Claim 1. Dependent Claims 22-38 (in which dependent Claims 22-27 and 30 have been further amended) depend from Claim 21. Dependent Claims 42-43 (in which Claim 42 has been further amended) depend from Claim 41, and dependent Claims 47-48 (in which Claim 47 has been amended) depend from Claim 46. As such, Claims 2-18, 22-38, 42-43, and 47-48 incorporate all the terms and limitations of Claims 1, 21, 41, or 46 in addition to other limitations, which together further patentably distinguish them over the cited references. Therefore, these dependent claims should also now be allowed.


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In view of the foregoing, the Applicants respectfully submit that Claims 1-54 are in condition for allowance. Reconsideration and withdrawal of the rejection is respectfully requested, and a timely Notice of Allowability is solicited. If there are any remaining issues that can be addressed over the telephone, the Examiner is encouraged to call Applicants' attorney at the number listed below.

Respectfully submitted,
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